This Listing of Claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

combining phenol, formaldehyde, water, and a base catalyst to form a mixture;

reacting the mixture to produce a reaction mixture containing at least a phenol-formaldehyde reaction product and free formaldehyde, wherein the reaction mixture contains more than 2.5% free formaldehyde by weight, based on a total weight of the reaction mixture;

combining a first formaldehyde scavenger and the reaction mixture, wherein the first formaldehyde scavenger includes a member selected from the group consisting of melamine, urea, ~~dicyandiamide,~~ guanidine, and ammonium hydroxide, and wherein a total amount of the first formaldehyde scavenger and the reaction mixture are combined such that a molar ratio of the free formaldehyde in the reaction mixture to the total amount of the first formaldehyde scavenger is in a range of 0.1 to 30;

combining a second formaldehyde scavenger and the reaction mixture, wherein the second formaldehyde scavenger is different from the first formaldehyde scavenger, wherein the second formaldehyde scavenger includes a member selected from the group consisting of melamine, urea, ~~dicyandiamide,~~ guanidine, and ammonium hydroxide, wherein a total amount of the second formaldehyde scavenger and the reaction mixture are combined such that a molar ratio of the total amount of the first formaldehyde scavenger to the total amount of the second formaldehyde scavenger is in a range of 0.075 to 13.5, and wherein a molar ratio of the free

formaldehyde in the reaction mixture to the total amount of the second formaldehyde scavenger is in a range of 0.1 to 20; and

reacting the reaction mixture, the first formaldehyde scavenger, and the second formaldehyde scavenger to form an infinitely water-soluble, modified phenol-formaldehyde resole resin, wherein the first and second formaldehyde scavengers react with at least some of the free formaldehyde in the reaction mixture, and wherein the modified phenol-formaldehyde resole resin has a free formaldehyde content of less than 3% by weight, based on a total weight of the modified phenol-formaldehyde resole resin.

2. (Original) A method according to claim 1, wherein the free formaldehyde content of the modified phenol-formaldehyde resole resin is less than 1.2% by weight, based on the total weight of the modified phenol-formaldehyde resole resin.

3. (Original) A method according to claim 1, further comprising:

adding an organic acid or a precursor thereof to the reaction mixture.

4. (Original) A method according to claim 1, wherein at least a portion of the first formaldehyde scavenger and at least a portion of the second formaldehyde scavenger are combined with the reaction mixture at the same time.

5. (Previously Amended) An infinitely water-soluble, modified phenol-formaldehyde resole resin produced by the method of claim 1.

6. (Original) A method according to claim 1, further comprising:

mixing the modified phenol-formaldehyde resole resin and a latent acid catalyst, wherein the latent acid catalyst includes at least one member selected from the group consisting of an ammonium salt of sulfuric acid, an ammonium salt of oxalic acid, an ammonium salt of

methanesulfonic acid, an ammonium salt of toluene-sulfonic acid, and an ammonium salt of phenolsulfonic acid, to thereby form a liquid mixture including a phenol-formaldehyde binder, wherein the latent acid catalyst is added in an amount such that the liquid mixture contains 0.1-20% latent acid catalyst, based on a total weight of binder solids.

7. (Original) A method according to claim 6, wherein the latent acid catalyst includes ammonium sulfate.

8. (Original) A phenol-formaldehyde binder prepared by the method of claim 6.

9. (Original) A method according to claim 1, further comprising:

mixing the modified phenol-formaldehyde resole resin with water to thereby form a liquid mixture including a phenol-formaldehyde binder.

10. (Original) A phenol-formaldehyde binder prepared by the method of claim 9.

11. (Original) A method according to claim 6, further comprising:

applying the phenol-formaldehyde binder to a fiberglass base material.

12. (Original) A fiberglass product prepared by the method of claim 11.

13. (Original) A method according to claim 11, further comprising:

drying the phenol-formaldehyde binder on the fiberglass base material.

14. (Original) A method according to claim 13, further comprising:

after drying, curing the phenol-formaldehyde binder on the fiberglass base material.

15. (Original) A method according to claim 14, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

16. (Original) A fiberglass product made by the method of claim 14.

17. (Original) A method according to claim 13, further comprising:

after drying, storing the fiberglass base material for a time period of at least one month.

18. (Original) A method according to claim 17, further comprising:

after storing, curing the phenol-formaldehyde binder on the fiberglass base material.

19. (Original) A method according to claim 18, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

20. (Original) A fiberglass product made by the method of claim 18.

21. (Original) A method according to claim 13, further comprising:

after drying, storing the fiberglass base material for a time period of at least two months.

22. (Original) A method according to claim 21, further comprising:

after storing, curing the phenol-formaldehyde binder on the fiberglass base material.

23. (Original) A method according to claim 22, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

24. (Original) A fiberglass product made by the method of claim 22.

25. (Previously Amended) A method comprising:

combining phenol, formaldehyde, water, and a base catalyst selected from the group consisting of oxides of alkali metals, hydroxides of alkali metals, oxides of alkaline earth metals, hydroxides of alkaline earth metals, tertiary amines, and mixtures thereof, to form a mixture, wherein the formaldehyde and phenol are combined in amounts such that a molar ratio of formaldehyde to phenol combined into the mixture is in a range of 1.8 to 4.5;

reacting the mixture to produce a reaction mixture containing at least a phenol-formaldehyde reaction product and free formaldehyde, wherein the reaction mixture contains more than 2.5% free formaldehyde by weight, based on a total weight of the reaction mixture;

combining melamine and the reaction mixture, wherein a total amount of melamine and the reaction mixture are combined such that a molar ratio of the free formaldehyde in the reaction mixture to the total amount of melamine is in a range of 4.5 to 7.5;

combining urea and the reaction mixture, wherein a total amount of urea and the reaction mixture are combined such that a molar ratio of the total amount of melamine to the total amount of urea is in a range of 0.1 to 13.5, and wherein a molar ratio of the free formaldehyde in the reaction mixture to the total amount of urea is in a range of 0.1 to 6; and

reacting the reaction mixture, melamine, and urea to form an infinitely water-soluble, modified phenol-formaldehyde resole resin, wherein the melamine and urea react with at least some of the free formaldehyde in the reaction mixture, and wherein the modified phenol-formaldehyde resole resin has a free formaldehyde content of less than 3% by weight, based on a total weight of the modified phenol-formaldehyde resole resin.

26. (Original) A method according to claim 25, wherein the free formaldehyde content of the modified phenol-formaldehyde resole resin is less than 1.2% by weight, based on the total weight of the modified phenol-formaldehyde resole resin.

27. (Original) A method according to claim 25, further comprising:

adding an organic acid or a precursor thereof to the reaction mixture, wherein the organic acid or precursor thereof is selected from the group consisting of maleic acid, citric acid, tannic acid, lactic acid, and maleic anhydride.

28. (Previously Amended) A method according to claim 25, wherein at least a portion of the melamine and at least a portion of the urea are combined with the reaction mixture at the same time.

29. (Original) A method according to claim 25, wherein the molar ratio of the total amount of melamine to the total amount of urea is in a range of 0.25 to 2.

30. (Previously Amended) An infinitely water-soluble, modified phenol-formaldehyde resole resin produced by the method of claim 25.

31. (Original) A method according to claim 25, further comprising:

mixing the modified phenol-formaldehyde resole resin and a latent acid catalyst, wherein the latent acid catalyst includes at least one member selected from the group consisting of an ammonium salt of sulfuric acid, an ammonium salt of oxalic acid, an ammonium salt of methanesulfonic acid, an ammonium salt of toluene-sulfonic acid, and an ammonium salt of phenolsulfonic acid, to thereby form a liquid mixture including a phenol-formaldehyde binder, wherein the latent acid catalyst is added in an amount such that the liquid mixture contains 0.1-20% latent acid catalyst, based on a total weight of binder solids.

32. (Original) A method according to claim 31, wherein the latent acid catalyst includes ammonium sulfate.

33. (Original) A phenol-formaldehyde binder prepared by the method of claim 31.

34. (Original) A method according to claim 25, further comprising:

mixing the modified phenol-formaldehyde resole resin with water to thereby form a liquid mixture including a phenol-formaldehyde binder.

35. (Original) A phenol-formaldehyde binder prepared by the method of claim 34.

36. (Original) A method according to claim 31, further comprising:

applying the phenol-formaldehyde binder to a fiberglass base material.

37. (Original) A fiberglass product prepared by the method of claim 36.

38. (Original) A method according to claim 36, further comprising:

drying the phenol-formaldehyde binder on the fiberglass base material.

39. (Original) A method according to claim 38, further comprising:

after drying, curing the phenol-formaldehyde binder on the fiberglass base material.

40. (Original) A method according to claim 39, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

41. (Original) A fiberglass product made by the method of claim 39.

42. (Original) A method according to claim 38, further comprising:

after drying, storing the fiberglass base material for a time period of at least one month.

43. (Original) A method according to claim 42, further comprising:

after storing, curing the phenol-formaldehyde binder on the fiberglass base material.

44. (Original) A method according to claim 43, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

45. (Original) A fiberglass product made by the method of claim 43.

46. (Original) A method according to claim 38, further comprising:

after drying, storing the fiberglass base material for a time period of at least two months.

47. (Original) A method according to claim 46, further comprising:

after storing, curing the phenol-formaldehyde binder on the fiberglass base material.

48. (Original) A method according to claim 47, further comprising:

shaping the fiberglass base material to a desired final shape during curing.

49. (Original) A fiberglass product made by the method of claim 47.